

PATENT CLAIMS

1. A transfer capable of applying one- or multi-coloured patterns to textiles under heat and pressure, **characterized** in that it comprises a carrier sheet (1) having a non-binding surface which carries
- (a) a one- or multi-coloured pattern (5) printed on the carrier sheet using a digitally controlled colour printer;
 - (b) a transparent (6) or white-pigmented (7) elastomer layer of a polymer having a high plasticizing point printed configuratively on the pattern (5); and
 - (c) a heat-activatable thermoplastic polymeric glue layer (8) printed configuratively on the transparent (6) or white-pigmented (7) elastomer layer, or a heat-activatable hot melt granulate sprinkled on the elastomer layer while this was still wet.
2. A transfer capable of applying one- or multi-coloured patterns to textiles under heat and pressure, **characterized** in that it comprises a carrier sheet (1) having a non-binding surface which carries
- (a) a first transparent elastomer layer (4) of a polymer having a high plasticizing point printed configuratively on the carrier sheet (1);
 - (b) a one- or multi-coloured pattern (5) printed on the first elastomer layer (4) using a digitally controlled colour printer;
 - (c) a second transparent (6) or white-pigmented (7) elastomer layer of a polymer having a high plasticizing point printed configuratively on the pattern (5); and
 - (d) a heat-activatable thermoplastic polymeric glue layer (8) printed configuratively on the transparent (6) or white-pigmented (7) elastomer layer, or a heat-activatable hot melt granulate sprinkled on the elastomer layer while this was still wet.

3. A transfer capable of applying one- or multi-coloured patterns to textiles under heat and pressure, **characterized** in that it comprises a carrier sheet (1) having a non-binding surface which carries
- 5 (a) a first transparent elastomer layer (4) of a polymer having a high plasticizing point printed configuratively on the carrier sheet;
- 10 (b) a one- or multi-coloured pattern (5) printed on the elastomer layer (4) using a digitally controlled colour printer;
- (c) a second transparent elastomer layer (6) of a polymer having a high plasticizing point printed configuratively on the pattern (5);
- 15 (d) a white-pigmented elastomer layer (7) of a polymer having a high plasticizing point printed configuratively on the second transparent elastomer layer (6); and
- 20 (e) a heat-activatable thermoplastic polymeric glue layer (8) printed configuratively on the white elastomer layer (7) or a heat-activatable hot melt granulate sprinkled on the elastomer layer while this was still wet.

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25A 4. A transfer ^{according to claim 1} ~~according to any one of claims 1-3~~, **characterized** in that the carrier sheet (1) consists of paper or a heat-resistant plastic sheet coated with a thin layer of silicone or polyolefin.

A 30 5. A transfer ^{Claim 1} ~~according to any one of claims 1-3~~, **characterized** in that the carrier sheet (1) is a polyolefin sheet.

35 6. A transfer according to claim 5, **characterized** in that the polyolefin sheet consists of high density polypropylene.

7. A transfer according to ^{claim 1} ~~any one of claims 1-6~~, characterized in that the transparent elastomer layers (4) and/or (6) consist of an elastomer polyurethane having a high plasticizing point applied in the form of a solution in an organic solvent.

A 8. A transfer according to ^{claim 1} ~~any one of claims 1-7~~, characterized in that the white elastomer layer (7) consists of an elastomer polyurethane having a high plasticizing point which is pigmented with a white inorganic pigment, applied in the form of a solution in an organic solvent.

15 A 9. A transfer according to ^{Claim 1} ~~any one of claims 1-6~~, characterized in that the transparent elastomer layers (4) and/or (6) consist of an elastomer polyurethane having a high plasticizing point applied in the form of an aqueous solution.

10. A transfer according to ^{claim 1} ~~any one of claims 1-6 and 9,~~
characterized in that the white elastomer layer (7) con-
sists of an elastomer polyurethane having a high plasti-
cizing point which is pigmented with a white inorganic
pigment, applied in the form of an aqueous solution.

25 A 11. A transfer according to ^{claim 1} ~~any one of claims 1-10,~~
characterized in that the glue layer (8) consists of
polyurethane thermoplastics having a plasticizing point
in the range 120-160 °C containing dispersed fine parti-
cles of a hot melt of copolyamide or high density poly-
30 ethylene type having a melting point of 100-140 °C in the
ratio 1:1, applied in the form of a solution of the
polyurethane in an organic solvent with dispersed hot
melt powder.

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activatable thermoplastic polymeric glue layer (8) or, while the elastomer layer is still wet, sprinkling a heat-activatable hot melt granulate on said layer.

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16. A method of making a transfer capable of applying one- or multi-coloured patterns to textiles under heat and pressure, **characterized** by, on a carrier sheet (1) having a non-binding surface,

- 10 (a) configuratively printing a first transparent elastomer layer (4) of a polymer having a high plasticizing point;
- (b) on top of the first elastomer layer (4), printing a one- or multi-coloured pattern (5) using a digitally controlled colour printer;
- 15 (c) on top of the pattern (5), printing a second transparent (6) or white-pigmented (7) elastomer layer of a polymer having a high plasticizing point; and
- (d) on top of the transparent (6) or white-pigmented (7) elastomer layer, configuratively printing a heat-activatable thermoplastic polymeric glue layer (8) or, while the elastomer layer is still wet, sprinkling a heat-activatable hot melt granulate on said layer.

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17. A method of making a transfer capable of applying a one- or multi-coloured pattern to textiles under heat and pressure, **characterized** by, on a carrier sheet (1) having a non-binding surface,

- 30 (a) configuratively printing a first transparent elastomer layer (4) of a polymer having a high plasticizing point;
- (b) on top of the first elastomer layer (4), printing a one- or multi-coloured pattern (5) using a digitally controlled colour printer;
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- (c) on top of the pattern (5), configuratively printing a second transparent elastomer layer (6) of a polymer having a high plasticizing point;
- 5 (d) on top of the second elastomer layer (6), configuratively printing a white-pigmented elastomer layer (7) of a polymer having a high plasticizing point; and
- 10 (e) on top of the white-pigmented elastomer layer (7), configuratively printing a heat-activatable thermoplastic polymeric glue layer (8) or, while the elastomer layer is still wet, sprinkling a heat-activatable hot melt granulate on said layer.

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A 18. A method according to ^{claim 13} ~~any one of claims 15-17~~, characterized by applying the transparent elastomer layers
15 (4) and/or (6) in the form of an organic solution of an elastomer polyurethane having a high plasticizing point.

A 19. A method according to ^{claim 15} ~~any one of claims 15-18~~, characterized by applying the white elastomer layer (7) in
20 the form of an organic solution of an elastomer polyurethane having a high plasticizing point which is pigmented with a white inorganic pigment.

A 20. A method according to ^{claim 15} ~~any one of claims 15-17~~, characterized by applying the transparent elastomer layers
25 (4) and/or (6) in the form of an aqueous solution of an elastomer polyurethane having a high plasticizing point.

A 21. A method according to ^{claim 15} ~~any one of claims 15-17~~ and 20, characterized by applying the white elastomer layer (7)
30 in the form of an aqueous solution of an elastomer polyurethane having a high plasticizing point which is pigmented with a white inorganic pigment.

A 35 22. A method according to ^{claim 15} ~~any one of claims 15-21~~, characterized by applying the glue layer (8) in the form of

an organic solution of polyurethane thermoplastics having a plasticizing point in the range 120-160 °C in which a fine hot melt powder of copolyamide or high density polyethylene type having a melting point of 100-140 °C is dispersed in the ratio 1:1.

A 23. A method according to ^{claim 15} ~~any one of claims 15-21~~, characterized by applying the glue layer (8) in the form of an aqueous solution of polyurethane thermoplastics having a plasticizing point in the range 120-160 °C in which a fine hot melt powder of copolyamide or high density polyethylene type having a melting point of 100-140 °C is dispersed in the ratio 1:1.

A 15 24. A method according to ^{claim 15} ~~any one of claims 15-23~~, characterized by printing the transparent elastomer layers (4) and/or (6), the white elastomer layer (7) and the glue layer (8) on the carrier sheet (1) by silk screen printing processes in the same register and configuration on top of one another.

A 25. A method according to ^{claim 15} ~~any one of claims 15-24~~, characterized by printing the coloured pattern (5) on the carrier sheet (1) or the first transparent elastomer layer (4) by means of a dry electrostatic colour toner printer, an ink jet printer with liquid dye or a thermo-transfer colour printer, all of which are digitally controlled.

A 30 26. A textile product on which a one- or multi-coloured pattern is attached by application from a transfer according to ^{claim 15} ~~any one of claims 1-14~~.

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